

substrate or a transducer coupled to the mesa or a driver. As such, the claims of the co-pending application cannot make obvious the claims 17-20, 23-35, 38-39, 43-47, 50-66, 74-76, 79-84, 87-90, 93-96 and 100-102 under the doctrine of obviousness type double patenting. As such, it is respectfully requested that the obviousness type double patenting rejection be withdrawn.

The rejection of claims 17-18, 23-35, 39, 41, 44-45, 50-66, 68, 70, 87-89, 93-96, 98, 101-109, 112-114, 117-118 and 120 as obvious under 35 U.S.C. §103(a) in view of Chatigny 5,673,041 in view of Thurn 6,107,722 is respectfully traversed.

Claims 17-18, 23-35, 39 and 41 specify “a substrate with a raised surface defining an acoustic wave cavity such that a thickness of the cavity is greater than a thickness of the substrate in an area adjacent the cavity.” Claims 44-45, 50-66, 68, 70, 87-89, 93-96, 98 and 101-109 specify a “mesa” formed on a substrate, the “mesa defining an acoustic wave cavity formed of the mesa and the portion of the substrate below the mesa.” Claims 87-89, 93-96, 98, 101-109, 112-114, 117-118 and 120 specify a mesa formed on or in a substrate defining an acoustic wave cavity. Neither Chatigny nor Thurn teach an acoustic wave switch having the claimed acoustic wave cavity defined by a raised area or mesa as recited in these claims. Because the acoustic wave cavity of the present invention is defined by a raised area or a mesa on the substrate, the acoustic wave cavity extends underneath the raised area or mesa but does not extend into an area of the substrate that is adjacent to the raised area or mesa. As such, a touch on the acoustic wave cavity defined by the raised area or mesa is detectable but a touch on the substrate adjacent the acoustic wave cavity is not detectable. Although Chatigny shows a substrate 16 in which an acoustic wave propagates, there is no teaching whatsoever in Chatigny of a raised area or a mesa that defines an acoustic wave cavity in the substrate. Because there is no raised area or mesa defining an acoustic wave cavity in Chatigny, the acoustic wave propagates in undefined and unbounded areas of the substrate so that Chatigny cannot identify the precise location on the

substrate actually touched. This is opposed to the claimed invention where the acoustic wave is substantially trapped in the area of the substrate underneath the raised portion or mesa so that a touch on the substrate adjacent to but not on the acoustic wave cavity is not detected. Although the Examiner cites the reference numerals 10, 12, 14, 16, 30, 32 of Chatigny as an acoustic wave cavity in the substrate 16, not one of these reference numerals refers to an acoustic wave cavity. In particular, in Chatigny, the reference numeral 10 refers to a piezoelectric element, not a cavity. The reference numerals 12 and 14 refer to electrodes neither of which is a cavity. The reference numeral 16 is the substrate not an acoustic wave cavity defined by a raised area or mesa as required by the claims. The reference numeral 30 is not used in Chatigny. Finally, the reference numeral 32 is described as "a solid line" on a graph in the figures at col. 5, ln. 29. Thurn does not overcome the deficiencies of Chatigny nor does it add anything to the teachings of Chatigny. Chatigny discloses a substrate and a transducer while Thurn discloses only an ultrasound transducer. Thurn does not disclose an acoustic wave switch having a substrate with a raised surface or mesa defining an acoustic wave cavity in addition to an acoustic wave transducer as required by the claims at issue. At most, Thurn describes a transducer. Since neither Chatigny nor Thurn teach the invention of claims 17-18, 23-35, 39, 41, 44-45, 50-66, 68, 70, 87-89, 93-96, 98, 101-109, 112-114, 117-118 and 120 these claims are believed to be allowable.

Reconsideration and allowance of the pending claims is respectfully requested.

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